

AMERICAN VETERINARY REVIEW.

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ASSISTED BY

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AMERICAN VETERINARY REVIEW,

APRIL, 1879.

ORIGINAL ARTICLES.

ADDRESS DELIVERED AT THE COMMENCEMENT OF THE AMERICAN VETERINARY COLLEGE.

BY PROF. J. LAW, of Cornell.

GENTLEMEN :

You have completed the course of study prescribed by your *Alma Mater*, and to-day you received the first reward of your earnest toil. To-day you have received that diploma which testifies to the success of your work in the class-room, the laboratory, and the hospital. To-day you matriculate into the higher school of the outside world, where your work is to be no longer the study of authorities and the receiving in faith of the general

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principles and practical details of that science to which you propose to devote your lives. You will often miss the guiding hand and wise counsel of your former teachers, and you will at times be puzzled by new and unexpected developments and pathology; but you will steadily gain in good judgment, and the power of applying sound principles to individual cases, and in an intelligent self-reliance, which will grow with your years and your availed-of opportunities. You will find that there is still much to learn; that what you have hitherto studied as general principles require many elastic adaptations when applied to particular cases; but, in applying these, you will be building up a superstructure of experience and skill which will swell into constantly increasing proportions as you proceed with your work. You will find the richest fields for investigation, views that the most assiduous of your predecessors have not even touched, and precious gems waiting to be culled by skilled and tireless workers. You will learn, however, that your position is not without its drawbacks. True merit is not always speedily recognized, and you may at times be shocked to see that hoary quackery, or even that which is young and aggressive, has left you behind in the race for popular support, and the question may obtrude itself, whether, after all, you have laid out your time and means to the best account. Permit one who has matriculated into this school a few years in advance of you, to offer a few words of counsel and encouragement.

First, then, never lapse into the idea that you have finished your studies, and that you can now afford to lie on your oars and be carried by the current to the haven of success. Keep it ever in mind that you have but graduated from one school into another, in which you must continue your curriculum with undiminished ardor if you would excel. Nor will a few months or years bring you any nearer to that point beyond which progress will be impossible. You will find that constant and endless gradations await you; that every step gained but gives you a vantage-ground for the next; and that even with old age "the patriarch pupil must be learning still, and dying leave his lesson half-unlearned."

And yet, gentlemen, this day marks a most important turning

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point in your lives. Hitherto you have worked entirely under the direction of others, you have been engaged in laying broad and sound foundations on a solid base, you have been forging and furbishing the weapons which you are to wield in the warfare of life. Now your work must be spontaneous and independent, your solid superstructure must be built up, your battle with disease and death must be a daily and earnest conflict. Now will tell the sound training through which you have passed. Now you can appreciate, not simply a cluster of outward symptoms as would the simple empiric, but, tracing effect to cause, you can see in the abnormality of the eye indications of particular cerebral lesions; in certain nervous disorders, results of digestive, urinary, hepatic, or eliminatory troubles; in certain skin eruptions, evidence of dyspepsia, hepatic torpor, lack of traumatosis, or of kidney excretion. From different altered conditions of the urine you can correctly infer disease of the kidneys, of the liver, of the lungs, of the brain, or of the loins. I might add indefinitely to this list, but these will suffice to point my statement that in the region of therapeutics "knowledge is power," and that that man whose practice has the most solid basis of *science*, or, in other words, of *knowledge*, is the man whose labors will be crowned with the most abundant success. It will take time to root out the ignorant empiric, but if you are true to your scientific foundations, and daily add a few more blocks to the imperishable structure, you will raise a name which all men will see and approve; you will be an honor to yourselves, to your *Alma Mater*, and to the country of your choice.

At the present moment our common profession is perhaps more highly appreciated in America than it has been at any time in the past. Men begin to recognize that the veterinarian is not a mere dispenser and administrator of drugs, nor a simple wielder of the surgeon's knife, but that he is in the highest sense a sanitarian. Here, gentlemen, we have already accomplished much. We can point with pride to the hundreds of millions that have been saved to each of the countries of Western Europe by the control and extinction of animal pestilences. Even America can testify of this work, and Massachusetts and Connecticut are

bright examples of its efficiency. Again and again have these States stamped out that bovine plague which is of all others the most insidious and destructive, that which, by reason of its prolonged incubation, literally "walketh in darkness," and, in an hour and place that no man feareth, claimeth its victims.

This plague is that which is now most prominently before the public and the veterinary profession in this country, and you will forgive me if I detain you by a few words on the subject. We have heard from men called veterinarians that this disease need create no alarm, that it exists only sporadically, and that there is no need for all the hue and cry that has been got up on the subject; for it is quite amenable to treatment, and can be put a stop to by inoculation! I do not so estimate the instructions you have received, as to suppose that any of you could be guilty of such assertions, but the country and the world have so much at stake in this matter, and such statements are so pre-eminently dangerous, that, until the land has been purged of this foreign "abomination of desolation," we can never too constantly nor too strongly condemn all attempts to belittle its baneful tendencies.

In answer to the charge that the contagious lung disease of cattle is not a source of danger, need I refer to the thousands of millions which it has carried off on the continent of Europe, or to the hundreds of millions which it has swept from the small island of Great Britain? It bears but a small figure in history, but therein lies its strength and the enormity of its power for evil. Cattle plagues have always spread from Eastern Europe on the occurrence of every great continental war. Wherever the fatal rinderpest carried swift destruction over the herds, killing off all the susceptible in a few days or weeks, it was followed by the slow, insidious, and masked lung fever, which numbered its victims by twos and threes at intervals of weeks or months, but, unlike its prompt and coverless predecessor, continued to hold its sway for years, and even decades, and proved in the end by far the more disastrous of the two. This is not the army that faces us boldly in the open plain and grapples with us in an equal warfare, but rather the designer of the masked fort, the unseen

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The disease is not epidemic, forsooth, when the single stable at Blissville has furnished its suffering animals by fifties; when scarcely a cow-stable in New York or Brooklyn can present a clean bill of health for the past year; when the malady prevails most extensively in six different States; and when, in spite of a current of cattle traffic strongly opposed to its progress, it has eaten its way for three hundred miles into the heart of the country, and is to-day, more virulent if possible, at the extreme limits of this area than at the point from which it started. I wonder what in the judgment of the objectors would constitute an epizootic! I can understand how stockholders who come near to the subject, or the general public who have not studied the reproduction and rapid increase of specific disease-poisons in the systems of the sick, should clamor for a cure, and attach importance to certain percentage of recoveries. But that men who have studied the laws of contagion and of the propagation of epizootics, should lend themselves to belittle a most insidious and fatal epizootic, which is itself an exotic, is almost incredible.

The susceptible ox inspires the imponderable particles floating in the air of an infected shed, and these particles go on multiplying for weeks and months, and float forth with every breath expired from the lungs; hour by hour and day by day does this go on, and finally when the victim succumbs, its respiratory organs are infiltrated with 20, 30, or 40 pounds of virus, the product of the germs in the original inhalation, that were so infinitesimal that modern physics has no balance delicate enough to weigh them. Those of you who have a taste for figures may amuse yourselves with an approximate computation of the possibilities of infection from one such case of sickness. If we did not start with the imponderables, but were to allow each animal a full $\frac{1}{100}$ grain of infecting material, and if all the products of our sick animals could be utilized for the infection of others, half the cattle of these United States might be contaminated from one

original sufferer. This, of course, is not really practicable. Yet it is instructive to let the mind dwell for an instant on the amount of virus produced in the diseased system, and the quantity necessary to infect a healthy organism. It gives us to realize how dangerous is the existence for even a single hour of a beast in the active stages of the disease, how perilous the lodgment of this poison in dry buildings where it can be preserved, and how full of hazard the importation of cattle from an infected country.

With some diseases that inspire greater dread the danger is incomparably less. A cow infected at New York with rinder pest or apthous fever, might be sent out to Kansas or Texas, but she would show sickness on arrival, and as the disease would show itself, after an equal interval, in the herd in which she was placed, these would imperatively call for seclusion, and would almost certainly obtain it, so that neighboring stock would be preserved. But let the contagious lung fever be similarly carried in the body of an animal, and the infected beast will herd with the native cattle for a whole month before anything is noticed amiss, and for another month the illness will show in the infected animal only. Meanwhile no precautions will be taken, so that half the herd may be infected before any danger is suspected. During the interval, by mingling of the infected with neighboring herds, the disease is likely to be spread, and if this once takes place on the unfenced cattle ranges, it will follow its own course in spite of any attempted restraint. Of this we have several striking examples. The great herds of the nomadic Tartars, grazing in common on the open steppes of Russia, have been afflicted with this, as with other animal plagues, from time immemorial. The numberless herds of the Australian squatters have suffered similarly since 1859, and the cattle of the Cape of Good Hope and Natal have been affected since 1854. Strenuous efforts have been made to stamp the infection from each of these countries, but the facilities for contagion are too great to allow of success; and so it will be with us, should we permit the disease to gain our open stock ranges. In a country like ours, where the disease is more seen but as the result of contagion from a pre-existing case of sickness, the presence of even one

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animal that is propagating the virus is a danger of the gravest kind.

The manifest remedy is to extirpate the poison. Now, as practiced over six different States, in all sorts of buildings and fields, and among all sorts of people, no system of quarantining and disinfecting of the sick can ever prove perfectly efficient. It is besides so expensive that a destruction of the infected herd and the payment of an indemnity by the State is far more economical. The system of killing the sick, avoids all danger of the diffusion of the disease, or of laying up the poison for future outbreaks, and it is that which has been proved in all countries to be the only successful course with fatal contagious diseases of animals that are not native to the soil.

Inoculation, like treatment, or like separation and disinfection, has never thoroughly eradicated this disease from any country. Belgium, Holland, England, France, Austria, New York and New Jersey, are illustrative examples. It lessens the losses in the individual herd, as would sound medical treatment, but it multiplies the poison indefinitely in the system of every inoculated animal, lodges it in the buildings and widens the area of infection. It lops off the terminal twigs of this mighty upas, but fails to strike the roots, and in place of killing it, gives strength and vigor for renewed growth. The man who practices inoculation or advocates it, contributes to the preservation and propagation of the disease, helps its extension to our western herds, and does his part towards a general infection, and the paralysis and ruin of our mighty and growing live stock interest. More, in this State the operation brings condemnation upon the inoculated animals, for they must now be considered as infected and subject to be slaughtered under the law.

As with the *lung fever*, so with other fatal animal contagions, such as rinderpest, bovine variola, swine plague, glanders, &c. Veterinary sanitary science has a great work to accomplish and bright laurels to win. She has but to go in and conquer. Besides the field of specific disease-poisons, she has to contend with an extended domain of parasiticism, and many of the parasites of the lower animals are equally inimical to man, so that this is one of

the many points at which we must clasp hands with the sister profession of medicine. We find for example, that man and animal reciprocate in supporting the *Tænia Solium*, *Tænia mediocamel-latta*, *Echinococcus*, *Bothriocephalus*, *Strouggulus*, *Gigas*, *Tricocephalus dispar*, the *Trichinæ*, the *Ascaris Mystax*, the *Fasciola Hepatica*, and various *Acarina*, *Ixodus* and *Cæstridæ*. Again among vegetable parasites they reciprocate in entertaining various fungi and mycozyrns, *Oidium*, *Tricophyton*, *Achorion*, *Bacillus*, &c. To meet these with sound preventative measures the physician and veterinarian must work hand in hand, and cut off the parasite at all stages of its life. Another and still larger body of parasites find their hosts in widely different genera of animals, or even in vegetables, while some spend a portion of their lives in water or other inorganic media, so that in contending with these we must not only extend our observation to feral animals, but also to botany, geology, watershed, drainage, and indeed to the whole environment, if we would have our labors crowned with success. The field extends in every direction as we contemplate it, and grand, noble and economic achievements await accomplishment in many different directions; labors that will crown the unselfish worker with lasting honor.

But one thing at a time. Let veterinarians unite in wise counsel and sound work for the extermination of the contagious lung fever, and they will conquer a name and a status which the profession in this country has never attained. They will thus accomplish incomparably more than can ever be reached in the way of legislation. They will gain an esteem and trust from the people that will bring forth future harvests of even richer fruitage and more abundant honor. The extinction of the exotic lung fever in America will open the way for the extermination of the prevalent fever of swine, and to the narrow restriction, if not to the obliteration of the glanders and farcy, of rabies, of malignant anthrax, of trichinosis, and of other forms of parasitism.

We can even hope to render essential service to the sanitarian of the medical profession, for as all animal contagia are closely related, and to a large extent subject to similiar laws, our triumphs

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will strengthen the hands of the sanitary physician, and serve to create a public spirit which will demand as a right the exclusion of small-pox, plague, yellow fever and other exotic contagia from our shores.

There are great possibilities before us, but they can only become realities if we prove ourselves equal to the work. To do this, we must be sound in professional knowledge, in the objects we aim at, and in integrity. To be an accomplished veterinarian is much, but to be an honorable man is much more. Fail here, and all your talents are worthless, and too often worse. You are even condemned in the court of your own conscience, and how can you hope for the confidence of the wise and good. Moral nobility alone will stand before God and man. Moral obliquity in a man, or in a profession, will sooner or later lead to ruin. Transgression of law will ever bring its punishment. I cannot touch the flame without getting burned; I cannot swallow atropia without being poisoned. But these may be done involuntarily; and in the absence of all guilty intention the harm is physical, and will end with physical results. But when we sin against light; when we stain our conscience by a wrong act done wilfully and in full knowledge of the evil, we undermine the basis of all honor and nobility, and take the first step into a moral decay that will forbid all future rise to worth or excellence.

A poet, who had looked deeply into the heart and life of humanity, says "An honest man's the noblest work of God." Here at the threshold of life, while full of youthful buoyancy of hope and vigor, in the strength of your early manhood, take up the standard of virtue and truth, and you will find it conducive to all sound material advancement, and, to what is much more valuable, to the possession of a name void of offence before God and man.

DIE AUGENBLENNORRHOE DER PFERDE UND IHRE FORMEN*.

VON FR. BLAZEKOVIC.

Translated from the Deutsche Zeitschrift für Tiermedizin. Vol. 4, p. 429.

The worse than embryological condition of veterinary ophthalmology must be my excuse for offering to our readers an almost complete translation of the paper in question, incomplete and wanting in exact micro-patho-anatomy as it is, for, as the drowning man grasps at a passing straw to save his life, so must we grasp every waif of knowledge which comes in our path, in the hope that an accumulation of such may end not only in a gradual completion of our knowledge, but may incite others, not to seek our literature and give us compilations of weekly errors and superstitions, but to endeavor to add some new facts by genuine original research.

We long to see the day when "our Review" shall contain contributions worthy of translation and recognition in other countries and among mediciners. Alas, when will the day come? Yet we have no reason to complain, for about all the matter of any scientific value in the *Veterinary Journal*, Britain's leading review, is like our own, purloined from continental workers. We have had a perfect surfeit of "transverse presentations," regular and irregular strangles and colics, of tetanus which ran out, and all such nonsense.

The author of the above has been in his present position in Russia for about six years, and on entering upon his duties received especial orders from the authorities to give every attention to a peculiar and lethal opthalmic disease which caused immense pecuniary losses to breeders and horse owners in the district; he says he carefully studied all accessible veterinary works upon

* The Blennorrhœ of the eyes of the horse and of its forms.

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ophthalmic, equine diseases, and then gave a long time to the serious study of medical works on the same subject, but that for several years the disease not only baffled his endeavors at its investigation, but treatment as well, and that only after having given to it the most exacting study, by observation and experiment, did he finally come to a correct knowledge of its ens, and attain success in its treatment. The disease is really not new, and many a practitioner will easily recognize it, as he reads the following, but it has been, as is too often the case, mystified, and rendered obscure, by the practice of veterinary writers—not investigators—of summing up everything under that wonderful, yet meaningless cognomen, "Ophthalmia."

The disease assumes in two forms, which may appear ontogenitically, or concomitantly, viz.: "Blepharoblennorrhoe and Ophthalmoblennorrhoe; in the first case it is limited to the conjunctiva palpebrarum, and the second complicates that organ in its entirety. Blennorrhoe ætymologically means a flow of mucons-like fluid ("Schleimfluss"—Deutsch). Pathologically the word is used to indicate an abnormal secretion, both quantitative and qualitative, of a viscid fluid from the surface of a diseased mucosa, as the result of inflammation. The surface of the mucosa suffers changes according to the textural changes produced, and according to the same secretes a serous like, mucoid-hæmorrhagic, purulent or purely mucous secrete. Blennorrhoe of the eyes is accordingly a pathic condition of the same, by which is secreted a fluid, having more or less of the above characteristics.

Resembling all mucosa-affections, the blennorrhoe of the eyes finds itself anticipated by a simple catarrh; yet the terminal results of the two disturbances are essentially different, and have only this in common, that under circumstances unfavorable to its course a simple conjunctival catarrh may terminate in blennorrhoe, although in such cases it is illusory to endeavor to draw the line of demarcation between the proto and denteropathic process. Yet it is very easy to distinguish between a simple catarrhal conjunctiva from blennorrhoe, in that the secreted products of the latter find the genesis in profound paranchymatous conjunctival disturbances, involving not only that organ, but the subcon-

junctival tissues and bound with danger to the entire eye, while the catarrhal process are of a simple inflammatory and superficial character. It is absolutely necessary, in considering the disturbances in question, to bear this differentiation sharply in mind, as the same is of essential diagnostic value, and because it plays an ætiological role in reference to blennorrhœ, for as said, under untoward circumstances the catarrh may terminate in the much more severe and lethal process. Whoever has seen and recognized the difference in both processes will scarcely find himself in a condition to make an erroneous diagnosis.

The blennorrhœ is essentially characterized by its acute eruption, which either succeeds to a highly developed inflammation resulting in an extremely profuse exudation of a thick purulent mass with complications of the conjunctiva and the adjoining tissues, formation of bullæ, clouding of the cornea, and lacrimal fluid, hæmorrhage, finally gangrenous excoriations of the cornea, and swelling of its parenchym, ending in rupture of the same, and finally in loss of the eye, or it first appears after the ætiological moment or momenta, whatever their nature may be, have been at work some hours, in seldom cases some days, followed by a fluïdo-cellulod exudate in the conjunctiva, leading to further complications with a more or less fluïdo-purulent character. This process remains either limited to the conjunctiva palpebrum and the tissues of the lids, or extends over the entire conjunctiva, occasioning finally inflammation of the adjoining tissues. This variability in the retention of the disturbances gives rise to the two forms which the disease presents to us, viz.: Blepharoblennorrhœ and ophthalmoblennorrhœ. A third form, the granulous affection of the lids, is only a conclusion following either of the above forms. The inflammatory character of these forms is with regard to the anatomic processes partly exudative, partly purulent and ulcerous, when the disturbance is more intense, degenerative and productive disturbance in the form of the above mentioned granulæ come to pass. The terminations of the diseases are very variable, and when the therapeutic interferences are irrational, ends in most cases with loss of sight, let it be as a consequence of the excessive grade of the inflammation and the

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above-mentioned disturbances, or as a consequence of numerous complications, and consequential disturbances, as opacity of the cornea, malformation, cataract, etc.

ÆTIOLOGIE.

The most difficult part of my task is to define the ætiological momenta of this disease, and to bring them in unison with the ens of the same. I have already sought to show that the inflammatory forms of this disease are spontaneous [That is, of unknown origin.—TRANS.] and virulent, according to the action of the causal influences.

It must be emphasized that the disease appears sporadically and as an enzootic. With regard to the latter, the chief factors which influence the ætiological momenta are, aside from a prevailing disease, constitution, climatic and telluric influences, which contribute not a little to the genesis and support of the enzootic. Influences of the most variable nature to which horses are exposed, are in condition, by concomitant action, to bring about such affection of the conjunctivæ. Local evils, unfavorable telluric conditions, poor stabling, render numerous appearances of the disease possible; the enzootic character finds support in poor food and the action of climatic influences. In this regard, the change in the seasons assumes a prominent place, as I observed very frequently in early spring and late fall that the disease appeared under such circumstances, and at such territorial condition, that it was impossible to favor ideas with regard to reciprocal infection; while at other times the disease could be only described as sporadic in its character. Again, it appeared under the influence of most unimportant conditions of the weather, such as wind and dryness, with as extreme violence as any other devastating pest. The "virous" character of the disease had at times a subordinate importance for its enzootic extension. I wish to place extreme emphasis on its "*virous*," and not its contagious, character, for, in these cases, *virus* and contagium are to be most strongly distinguished, as this point is not, perhaps, so sharply prominent in any disease capable of dissemination per infection, as by the disease in question; for the

virus first receives its activity as an infectious element when it has suffered certain metamorphoses in the diseased part, or has favored the development of certain zymotic elements or fungi in the same, while contagium acts directly, independent of the grade of development, or the progression of the disturbance from which it proceeds, and it is not necessary that a certain period of development of the same be attained before it becomes active. Its action is not limited by any period of development, let the infection's centre come from whence it will.

This disease is without doubt infectious, yet, according to my observation and experience, it contains no specific contagium; but the disease must pass through certain phases before its secrete attains its infectious properties; *hence, the disease is not infectious in all stages of its course.* The infectious nature of the disease is accordingly virulent, but, as the infectious elements are not of a transportable character, the pest-like extension of the disease is much more insignificant than by pests characterized by easily transportable infectious elements.

A limitation to the extension of this disease by means of its infectious elements results from the circumstance that the activity of these elements is limited to a period conformable to the pathic processes. This, with the previously considered causes, may well be *causa sufficiens* that the disease does not assume an epizootic, but always retains an enzootic character, even though at times presenting itself as a virtual pest.

In many medical works on ophthalmology we find various remarks over the extension which such diseases at times acquire by means of infection, yet we do not find any author ascribing to the infectious elements a highly portable character. The extension finds its best explanation in uncleanness, especially among the working classes; while ophthalmologues frequently give evidence of one eye becoming infected by transmission of the infectious elements at the hands of the person diseased. I have been unable to constitute any such case, by the disease in question, among horses. In all cases, only one eye was primarily diseased, and, as said, an infection of the other by infectious elements from the diseased has not come to my observation. If both eyes were

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diseased, it was a coeval infection. The infection by virus-pollution* is very seldom by animals, as I have repeatedly had occasion to observe that, where a diseased and non-diseased animal were worked together infection seldom took place—so seldom that at first I could not prevail on myself to believe an infection possible; repeated experiment has however finally convinced me that the latter is possible. These inoculations have proven to me the "virulent" character of the infectious elements, and have also shown that in many cases they remain entirely inactive. The majority of cases must be traced to a genuine or spontaneous [That is, unknown.—TRANS.] cause, out of which develops the virulent character of the elements produced by the disease-processes. Accidental causes were not observable, yet insignificant irritations appear to have ability to generate the disease. The ætiology of this disease still remains much in the dark, and gives abundant opportunity for further research.

[To be continued.]

ATROPHY OF THE PLANTAR CUSHION.

By G. CHENIER. TRANSLATED BY A. LIAUTARD, M.D., V.S.

(Continued from page 504.)

V.

TREATMENT OF THE ATROPHY OF THE PLANTAR CUSHION, AND OF ITS SEQUELÆ.

Numerous are the inventors who pretend to give the foot back its normal shape. Poor, crippled horse, feet doctors are plenty.

Nombreux sont les inventeurs qui ont la prétention de restituer au pied sa forme normale. Pauvre cheval estropié, il ne manque pas de pédicures!
—L. GOYAU.

To complete the question of the treatment of the plantar cushion and its sequelæ, it would be necessary to pass in review,

with commentaries, all the treatments recommended against these numerous diseases. But this would have more an historical interest than a true practical benefit. If, indeed, one looks over the publications on that subject, he would be surprised at the number and varieties of these treatments. Specially would this be in relation to the treatment of hoof-bound proper and of quarter-crack, where the proposed remedies—all more or less certain—are so numerous and varied. For instance, for quarter-crack alone we know of no less than fifteen different modes, from the putty of Defay's and the inoffensive oil of cade, to the lateral fissures, which, by the way, have no other effects than to add two new cracks to the one already existing, and thus facilitate the movement of contraction. For the hoof-bound proper, there is a full therapeutical arsenal.

All of which shows well the difference of opinions as to the nature of these diseases; evidently, if that was well decided, methods of treatment entirely contradictory to each other would not have been recommended.

A.—GENERAL INDICATIONS.

The art of the horse-shoer is to try to preserve the hoof in its integrity of form, so essential to that of its function.

L'art du maréchal doit se proposer pour but à atteindre de conserver au sabot l'intégrité de sa forme si essentiellement liée à celle de sa fonction.—
H. BOULRY.

The opinion which we have expressed in these pages gives an idea of the solution, to which we will give the preference. Thus, we put aside, from principle, all the indications which have not for objection to render to the plantar cushion its vital properties, resting our opinion upon the idea that the participation of the frog at rest is the condition, *sine quâ non*, of the integrity of the foot.

Two indications rest naturally on our thesis: 1. Prevent the atrophy of the plantar cushion; 2. Render to that organ its vitality, if already atrophied.

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is to respect the frog while shoeing. This organ seems to say, *Noli me tangere!* And, perhaps, was the veterinarian right, who, according to Mr. Merche, had placed at the door of the shoer shop a sign: "Do not touch the frog!" This recommendation could not be insisted on too much. Do we not often see our blacksmiths paring the frog to excess?

If the contraction of the wall is already existing, if the frog has already undergone a process of atrophy, the curative treatment must be looked for. Remove the shoes and turn him out in soft damp fields, where the foot can sink and the plantar surface come down to rest. This may prove useful even in yet well marked hoof-bound. This fact was already known by Ruini, in the 17th century.

"Ploughing on soft ground, with thin, light slipper, allows to the foot the contact of the damp ground, and gives very satisfactory results" (L. Goyau).

The shoeing to be used varies with the intensity of the affection. If at the beginning of the disease, the *ferrure à lunette* is sufficient; later, the bar shoe.

The benefits of the bar shoe are not ignored by any one. Many employ it and are satisfied with it. Goyau says of it: "A quick and great spreading of the foot is obtained, if its application is preceded by the thinning of the contracted wall. * * * With it, the animal is kept at work, and the hoof grows down with quite considerable dimensions." (The paring of the wall seems to us useless.)

If the frog is too atrophied, and the bar of the shoe cannot rest on it, it is necessary to have recourse to an artificial frog of gutta-percha, which allows that pressure of the bar of the shoe to take place. MM. Jeannin and Dupon were the first to recommend it—the former in 1862, and the latter in 1868. Mr. Goyau modified their mode of using it, by placing an entire cover of gutta-percha over the whole plantar surface of the foot and placing the shoe over it, after having pared the foot, the frog well cleaned, and the bars thinned carefully.

We operate as follows: We clean the frog, pare the wall and the sole slightly. If the frog is thrushy, we dress it with *Ægyp-*

tiacum ointment. The shoe ready, we cover the posterior part of the foot with gutta-percha, softened in warm water. We mould it well upon the foot, and then nail the shoe on. The foot cooled off, the gutta percha hardens. When the foot is down the frog must rest and press on the bar of the shoe. The next day we trim off the excess of gutta percha and leave the foot alone, which, sometimes for forty days, needs no other attention.

The animal can be kept at work, even if very lame, but then at slow walking work.

B.—SPECIAL INDICATIONS.

1. Symptomatic quarter-crack:

All shoes which have for effect to open artificially the heels will cure quarter-cracks, but none will prevent their return. To obtain this, the first indication is to stimulate the vitality of the plantar cushion. To this effect, the bar shoe is the best application to be used.

If the solution is superficial, there is no special indication. If it is deep, the thinning process may be found beneficial. This, in stimulating the latent action of the podophyllous tissue, will hasten the cure, though it presents the objection of rendering the animal useless, no matter for how short time it may be.

2. Symptomatic corn:

Nothing particular to notice. After paring carefully the corn, it is again the bar shoe that we employ. This corn being generally the first effect of hoof-bound, it is rare to find that the frog is so atrophied that it cannot rest on the bar of the shoe.

Though Lafosse recommended the short-branched shoe, we prefer the bar shoe.

3. Navicular disease:

If we had navicular disease to treat, we would use the same treatment as in hoof-bound, and we feel satisfied that it would prove as satisfactory "as the setons in the shoulders, the administration of iodine internally, or the seton through the plantar cushion."

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EDITORIAL.

OUR THIRD VOLUME.

With this number the *American Veterinary Review* enters on its third year.

Started under the patronage of the United States Veterinary Medical Association, it was not without fear that the editorial staff assumed the duty of issuing this organ of veterinary science in the United States, but notwithstanding all the obstacles which had to be overcome, the low standing of the profession in the country, the small number of veterinarians likely to support it, and the ever ready slurs thrown against it by unworthy so-called members of the profession, it has filled one of the great needs of the American veterinary practitioner, and is to-day presenting itself fearless of any danger as to its future life.

The second volume has been much more interesting than the first, a larger number of pages, containing more elaborate articles have been offered to our readers. and while we offer our contributors our sincere thanks for the kind assistance they have given us, we hope they will continue to help us in making the *Review* the true and worthy representative of the veterinary profession in America.

AMERICAN VETERINARY COLLEGE.

The winter session of the American Veterinary College is closed, and the Faculty is now engaged in the delivery of the lectures of the spring session. The closing exercises were an opportunity for the people of New York city and surroundings to show the interest taken in the welfare of the school and the appreciation of the work done by that young institution. It is but four years since the American Veterinary College has been organized, and yet, while the class proved then very small, the

matriculation book for the session 1878-9 registered no less than forty-two students, out of which a graduating class of eight were awarded the degree of Doctor of Veterinary Surgery. The Alumni Association counts to-day thirty-four members spread in different parts of the country, and endeavoring to elevate the profession by careful fulfilment of their duties, undermining slowly perhaps, but surely, the work and influence of the empiric and of the impostor, who cannot help but see that their days are counted.

PLEURO-PNEUMONIA.

The greater part of this number of the *Review* is made up of material relating to pleuro-pneumonia. This we do, not only for the benefit of our American friends, but also for our foreign readers. England is no doubt desirous to know all she can learn relating to the existence of that disease in this country; and certainly English veterinarians are anxious to read of the measures which our state governments will take to destroy the bad effect produced by the neglect of our general government. If our cattle trade has been threatened, we fear that it is the fault of our government, which for years has overlooked the advices which it receives from competent veterinary authorities; and we cannot help looking at the position taken by England as a blessing for the acknowledgment of veterinary science in America, and of its appreciation by the proper authorities.

New York, with General Patrick and Professor James Law, with their body of veterinary assistants, are at work, and have destroyed the true centre of infection of Long Island in annihilating the Blissville establishment, in regulating the quarantine, the traveling of cattle, and somewhat the slaughter of animals.

New Jersey has appointed Colonel Sterling, with Professor A. A. Holcombe, D.V.S., and soon the machinery of stamping out will be in good running order; and this will be most gratifying to hear by many, as it is known that in that little State peculiar theories relating to the disease have been publicly advanced, and

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somewhat, admitted by the laity, and also that inoculation had obtained a firm foothold as a means of eradicating the disease.

Connecticut is on the alert, and by careful quarantine her Cattle Commissioners are keeping the disease within bounds.

Pennsylvania is also at work. The consulting Veterinary Surgeon to the Board of Agriculture informs us that pleuro-pneumonia prevails in Philadelphia and vicinity. Steps are already recommended, and we understand no half-way measures will be taken.

The reports of the existence of pleuro-pneumonia in the stock yards of Chicago proved to be a false alarm, according to Dr. N. H. Parnell, the veterinary authority, and nothing but the result of an over excited mind, which on cooler investigation altered its first diagnosis.

The announcement of its existence in Rhode Island has been professionally corrected.

By official information we hear through the Cattle Commissioners of Massachusetts that, "Thus far, in spite of the stir made in the matter, no case of pleuro-pneumonia or rinderpest has been found among cattle."

Everything therefore looks well, and though it may take us a few months before we are entirely rid of pleuro-pneumonia, there is no doubt but that it will be stamped out in the few Eastern States where it exists, that it will not be allowed to cross the mountains westward, and that therefore the restrictions of England will have to be cancelled in a short time. Once relieved from this great danger, we hope our government will see the propriety of keeping a close watch against the possibility of its reimportation.

PLEURO-PNEUMONIA.

REPORT OF THE CATTLE COMMISSIONERS OF MASSACHUSETTS RELATING TO PLEURO-PNEUMONIA IN 1863.

COMMONWEALTH OF MASSACHUSETTS.

To the Senate and House of Representatives of the Commonwealth of Massachusetts.

By an Act of your honorable bodies, approved February, 1862, the present Commission on contagious diseases of cattle was established.

On the 25th of the same month the following named persons were appointed by the Governor and Council to constitute the Board of Commissioners, viz: E. F. Thayer, of Newton; H. L. Sabine, Williamstown; and James Ritchie, of Roxbury.

Two of these persons were without experience in regard to the subject matter committed to their charge, and inclined to receive with great caution the evidence of the existence in this country of a contagious lung disease among cattle. The State had already expended large sums of money, and great losses had been incurred by individuals, for the purpose of purging our cattle herds of the disease termed pleuro-pneumonia. In the community there was a divided sentiment in regard to the policy pursued by the previous Board of Commissioners in relation to this matter. Many ridiculed the whole proceedings, and some of the members of your honorable bodies were much inclined to doubt the expediency of establishing a new Board of Commissioners, with such vast powers as were conferred by the Acts of April and June, 1860. In view of these facts it was decided by the Commissioners, at the outset, to take nothing for granted, but to commence *de novo* and proceed with care and discrimination in the examination of all cases which might be presented for consideration.

A representation had been made in print by a committee of the State Board of Agriculture, about the middle of February, to the effect that the disease called pleuro-pneumonia had made its appearance in the county of Norfolk, and on the 1st of March a communication was received from the selectmen of the town of Milton, calling upon the Commissioners to visit the herd of William A. Houghton, of that town. On the first day of January, 1862, this herd consisted of eight cows and two Jersey heifers. The first sickness in a cow of this stock was noticed about the middle of the same month. This animal had been in Mr. Houghton's possession four years. She was kept with the other stock until the 8th of February, and was then transferred to the barn of Mr. Isaac Houghton in Dorchester, where no other cattle were kept. This cow continued sick, becoming very much emaciated, and on the 10th of March, was killed by order of the Commissioners. On examination both lungs were found badly diseased; the right lung contained a hard lump weighing about four pounds, firmly encased. On cutting open the covering a quantity of very offensive matter appeared, sur-

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rounding a piece of solidified lung in which the cells were distended, and the usually very thin membranous tissue was thickened to a quarter of an inch. The left lung exhibited similar developments, with the exception that the cyst was smaller. Mr. Hatfield, the butcher, declared that among all the cattle he had killed, some of which had been variously diseased, he had never seen anything resembling what was presented in this case. A portion of the lungs of this animal was taken to the State House and exhibited to the Governor and Council and to many members of the Legislature. On inquiry of Mr. William A. Houghton it was ascertained that another of his stock was sold in January, in poor condition, to a German butcher engaged in the manufacture of Bologna sausages. Still another died in February, before notice was given to the selectmen. This notice was served on the 13th of that month, and on the following day the authorities took formal possession of the herd and had one of the cows killed, which was found to be diseased in her lungs in manner answering to the usual description of the malady termed pleuro-pneumonia. On the first visit of the Commissioners, March 1st, a cow that had taken neither food nor drink for six days was killed. On examination the right lung was found wholly diseased. The exudation had been excessive and the lung was firmly adherent to ribs and diaphragm. The left lung was in the main without disease, although exhibiting evident marks of having been overworked.

An examination into the origin of the disease in William A. Houghton's herd, and into that of another herd similarly infected in the town of Quincy, a full account of which will be found in a subsequent part of this Report, induced the Commissioners, in view of the experience of other years and as a measure of proper precaution, to act on the presumption that the disease was infectious. They accordingly ordered the entire isolation of all herds of cattle which, by any possibility, might have had any contact with one of the animals supposed to have been infected, and prohibited the buying or selling of cattle by the owners of such herds.

On the 11th of March, the Commissioners submitted a partial report to the House of Representatives, in response to a resolution of that branch of the government, in which the hope was expressed that the disease would be very limited in extent. Subsequently, however, cases were multiplied; and for some time it was feared that the infection might have reached every portion of the Commonwealth. The Commissioners were summoned in various directions, but in the main, ascertained that these requests were caused by cases which on examination presented no appearances like those developed in the examinations in Milton and Quincy. In one instance, in the town of Rutland, an ox died very suddenly. His yoke-fellow was sold to a neighboring farmer, and the ox to which this had been mated was taken sick and subsequently died. The lungs in these cases were examined. One was without disease in those organs, and the other presented a case of severe bronchial inflammation. In fact, in all the cases presented where no contact could be even inferred, not the slightest indication, like those of the disease termed pleuro-pneumonia, was exhibited.

About the first of April, from inquiries made at Brighton and Cambridge, it became known to the Commissioners that a disease of a peculiar nature had appeared in the herd of E. Welch, a milkman in South Boston. On examination it was ascertained that a cow which had been exposed in Dorchester, had been purchased and introduced into his herd about the 9th of January, and that sev-

eral of his cows had been taken sick. Accordingly his herd was isolated, but as in this and other instances, it appeared to the Commissioners that, in such situations, the isolation could not be perfectly secured, arrangements were made for the removal of the infected herds to some secure place, where the public would not be endangered, and where experimental knowledge might more readily be acquired as to the nature and progress of the disease. Accordingly the Commissioners took possession of a farm at Squantum, which was under lease to one O. C. Barnes, the owner of an infected herd; and all the herds which were then known to be infected, were removed thither in the night time. The buildings to which the cattle were removed were old and fully ventilated in every direction, but the disease soon took hold of the healthy animals, and when killed very few were found to have escaped the infection. A sick cow was purposely tied between two apparently perfectly healthy. These in the course of a few weeks became sick, while the cow in the middle became apparently better, but when killed was found badly diseased, the unhealthy portion of the lungs having become encased with a firm membranous covering.

Many members of the last Legislature visited Squantum, and were present when cattle were killed. They were all satisfied as to the peculiar character of the disease; and those who doubted when they went, returned convinced. In fact, there remained no longer room to doubt the infectious nature of the disease. Many animals fully exposed entirely escaped. Well fed milch cows rarely failed to take the disease. Bulls, oxen, heifers and poor cows were more commonly among the exempts. It does not appear that the disease is so infectious as the small-pox among human beings. It is, however, sufficiently so to be very alarming. As an approximation, it may be stated that twenty-five per cent. of an infected herd will die, fifty per cent. may recover so as in a measure to be healthy, but when killed will be found to have a portion of diseased lung fully encased and separate from the healthy portions, and twenty-five per cent. will come out in perfect condition.

One hundred and fifty-four cattle have died or been killed during the past ten months under suspicion of having been infected. Of these forty-four were cattle pastured on Long Island, killed for reasons hereinafter to be given. Of the remaining one hundred and ten, seventy-seven were diseased and thirty-three perfectly healthy. Contact was proved in all but one instance, which may be thus given.

Mr. William Walker, of Quincy, was at Squantum when diseased cattle were killed there. He examined closely portions of diseased lung and walked through the blood of the slain animals. He then rode home a mile and a half and went to the barn and fed his cattle. These became diseased. Two were sold to E. B. Taylor, and all but three out of his herd of twenty-one were found diseased. Another was sent to Long Island where forty-four cattle belonging to individuals in different towns were pastured. This cow was taken sick and when killed was found to be diseased with this peculiar form of disease. This affair caused great perplexity to the Commissioners. The cattle on the Island had all been exposed and yet they appeared perfectly healthy. It was decided to keep them on the Island until it was necessary to dispose of them for want of shelter. The owners were consulted and either they or their neighbors objected to their removal from the Island. Intelligent stock owners in various parts of the Commonwealth remonstrated against endangering the whole cattle of the State for

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the sake of the comparatively insignificant sum of eight or nine hundred dollars. Accordingly the cattle were killed on the last week of November, and all found perfectly healthy. Had it not been done the community would have been full of apprehension. The law in relation to the disposal of exposed cattle found perfectly healthy was so worded that an insignificant amount was realized from the sale thereof.

The following concise statement will sufficiently explain the main features in the progress of the disease in this State during the past year.

In March, 1861, Mr. J. F. Eaton purchased a yoke of cattle of a person at Brighton who had the same day bought them of a driver from North Hampton, N. H., named Jonathan Filbrick. A gentleman in search of a pair of oxen had previously declined to take these on account of their unhealthy appearance. Soon after Mr. Eaton had put these cattle to work on his farm one became sick, then the other, then a bull stalled next to the oxen. All of these died of a loathsome disease. Very soon his cows, one after another, were attacked. Several died and some were killed to put them out of misery. Those that apparently recovered were afterwards found to have the disease encysted or covered over for a time. In August Mr. Eaton sold eight cows to Mr. John Holbrook, of Randolph, two of them at the low price of five dollars each. Finding it difficult to get these two home Mr. H. bargained with an Irishman to take two weary cattle on the road for the sum of ten dollars. The cash not being on hand, the verbal promise to pay was taken, but as one cow was nearly dead when the purchaser found her, and as the other died shortly after the purchase, only fifty cents were realized out of this shrewd bargain. The other six cows, after remaining a few days in a field with a cow and a calf previously belonging to Mr. Holbrook, were sold to Mr. Loring Tirrell, of Weymouth, for a sum less than that paid Eaton by Holbrook for them. Before reaching home Mr. Tirrell found that two of the cows were sick, and on his arrival he tied the two up in a barn with a cow he had kept for about a year to supply his family with milk. The three were afterwards turned out to pasture together, where they all died. Three of the remaining were killed for beef, and the remaining one was sold. The latter was traced out, bought and killed and found not diseased. This ended,—through the mere circumstance that this cow sold had not become infected,—the progress of the disease in that direction.

The cow which Mr. Holbrook had at the time the six before mentioned were in his pasture and which was never suspected until killed of being diseased, was sold to O. C. Barnes, of Squantum, who at that time had a milk herd of thirteen cows. Three of these were soon after sold for beef. In November one of his cows was taken sick and died. About the first of December, another was taken away by Fillbrook, the butcher, who saw the lungs of the one that died. Mr. Fillbrook had at that time in his barn thirty or more milch cows. The cow from Barnes', while on the way to the slaughter-house, accidentally went into the barn among these cows. When killed the lungs of this cow were found so diseased that the carcass was sent to Ward's factory. In a short time thereafter several of Mr. Fillbrook's cows became sick. He killed nearly all of them, and such as were healthy went for beef. Eight, however, of the carcasses could not be used and were sent to Ward's. Seven of O. C. Barnes' herd proved to be diseased. From this point the disease was carried in various directions, and was only stopped

It having been urged that in Brooklyn, N. Y., and Bordentown, N. J., the same disease existed, and that its origin could not be traced, the Commissioners deemed the subject of sufficient importance to warrant them in making a personal examination of its developments in those places. They visited Brooklyn, and examined the famous stables in Skillman street and elsewhere, and ascertained that the disease took off annually thirty per cent. of the cattle; that inoculation had been tried without perceptible advantage, and that the effects of the disease were such that the keeping of cattle in those places was fast becoming profitless. It appeared on investigation, that the theory of the self-producing character of the disease, or that it was generated in badly ventilated stables, was wholly without foundation; and the Commissioners were able to trace the whole disease in its entire course to one cow, brought over in a ship from England about twelve years since, and sold to a German, near South Ferry, Brooklyn. This cow was transferred to one of the herds in Skillman street, where the disease was never heard of before, and there it died; since which time it has not ceased to prevail there with more or less intensity.

A cow, sick with a very painful disease, was offered to us for examination, and on killing and opening her there were developed precisely the same appearances as were witnessed in those cattle killed by order of the Commissioners in Massachusetts.

In New Jersey, as in New York, the Commissioners had an opportunity for examining the lungs of diseased cattle, and with the same result. They also succeeded in tracing the disease in all cases to Philadelphia, to which place, according to general belief, it was brought by cattle from Holland.

The Commissioners feel that they have so managed this subject as to allay the apprehensions of our farmers, and yet they desire to state, that exemption from this great evil can only be purchased by eternal vigilance. We have little fear of it from Brooklyn or New Jersey, but there is danger of its approach by the way of Albany, N. Y., and we should recommend as a matter of common prudence that some commission be kept in existence ready to meet the malady at its first approach.

If New York, New Jersey and Pennsylvania would adopt similar measures to those in this State, it would be one of the most effective modes of securing the whole community against this disease, which, if allowed to prevail, would endanger all the neat stock in the country, and greatly deteriorate the most substantial food of the people. One pertinent fact may be stated here, viz: that a single cow imported into Australia with this disease shut up in her lungs, has imparted the same, by computation, to no less than 100,000 cattle.

In conclusion the Commissioners are satisfied,

- 1st. That this disease has never been generated in this country from local causes.
- 2d. That it is altogether an imported disease.
- 3d. That in general it is communicated by contact of breath.
- 4th. That it cannot be eradicated by treatment.
- 5th. That those cattle which apparently recover are the most dangerous, as they are liable at any time to come down with the disease a second time.
- 6th. That by care it may be prevented from extending from one herd to another.

The appropriation for the expenses of the commission was \$5,000. There have

been already audited and paid bills to the amount of about \$4,800. The estimated amount of bills not yet audited is \$900, making in all an expenditure of \$5,700, and leaving a deficiency of \$700, for which an appropriation is required. This amount is in addition to that paid by the several towns where the disease has existed.

It is due to Dr. E. F. Thayer, one of the members of this Board, to state that in addition to his other labors he has personally as veterinary surgeon examined the lungs of every animal that has died or been killed under suspicion of contagious disease, thus saving a large expense for veterinary services which otherwise must have been incurred. His associates would respectfully recommend an appropriation to pay him \$200 for his extra services.

Our thanks are given to the many farmers, drovers and veterinarians who have greatly aided us in our efforts to stay the progress of this disease.

Respectfully submitted.

JAMES RITCHIE,
E. F. THAYER,
HENRY L. SABINE,

Commissioners on Contagious Diseases of Cattle.

BOSTON, January 6, 1863.

PLEURO-PNEUMONIA IN NEW JERSEY.

By J. C. CORLIES, D.V.S.

Since this dread malady has assumed such immense proportions, and engrossed so much attention from an interested public, we make bold to believe a brief sketch of its rise, history and progress in the State of New Jersey will not be uninteresting. Accurate data places the disease in Brooklyn, New York, as early as 1843, from where it was transmitted to Chatham, New Jersey, in 1846, and generally transferred through the northern counties of the state. There being a large traffic in cattle about this time between the two states, there is but little doubt that it was carried by such purchases in New York to various other points, and not a little of it can be traced to the importation of affected animals coming direct from Europe. Recent investigations prove that it has been steadily increasing ever since, until to-day we fear we have a widely diffused malady of no mean proportions, and one which involves no light task to eradicate. A

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fortunate circumstance associated with its early advent into the state, is that it was first introduced by stock-raisers of intelligence and affluence, who, knowing its malignant character, grappled with it by practicing occision, thereby keeping it to a great extent in check. But being a subtle enemy who knows no bounds, it soon crept in among the animals of the lower classes, who depended largely upon the product of their cattle for their sustenance, and felt they could not afford to loose them; hence, whenever they found the malady among their stock, made haste to exchange them for other and healthy animals. Many unscrupulous persons took advantage of this circumstance to speculate in diseased animals, and often realized handsomely by dealing them off to the unsophisticated farmer who never saw or perhaps heard of the disease until the stern, stubborn fact of having it among his own cattle was staring him in the face. This fact demonstrates the necessity for early legislative action, the only means by which we may hope to effect its eradication. Many and various were the means employed to effect a cure, the cow leech reaping a rich harvest by the preparation and administration of his favorite nostrum, and it is not uncommon to-day to meet that gentleman with his *sure cure*, which may be purchased at the farmer's own figures. But they soon learned, after paying liberally for the lesson, that they had an incurable malady to contend with, and began looking around for something more substantial, which was claimed to be found in the much lauded but reprehensible prophylactic European practice of inoculation. Words fail to portray the amount of injury resulting from that practice. As inspector of cattle, it has been our duty for the past few days to investigate the existence of the disease in and about Newark, N. J., and there is scarcely a stable where it has been practiced that we do not find more or less lung lesions in consequence, rendering each inoculated animal a medium of contagion, from which the disease may be distransmitted. We feel it our duty to urge upon the Governor the necessity of taking some steps to prevent its further use. In 1861, the State Board of Agriculture becoming alive to the importance of the subject, appealed to the Legislature to take some action toward having it and

other bovine diseases investigated. With that object in view, a bill was passed appropriating \$1,500 for the purpose. It fell into the hands of the politicians, and was used to no purpose. Again, in 1867 a bill was passed conferring upon township committees the right to investigate, quarantine and slaughter all infected animals in certain districts, but there being no appropriation made, the bill was necessarily unconstitutional, and the committees not meeting with any encouragement from outside parties, but rather becoming unpopular, so far as we can learn, it was not in a single case enforced, and has remained upon the statute books as a dead letter ever since. The disease continuing to make rapid progress, in connection with the action of the New York Legislature, a heavy pressure was being brought to bear upon the Legislature by suffering stock-raisers, a bill was framed similar in its working to the New York bill. Under its provisions Colonel W. H. Sterling, of Plainfield, N. J., was appointed Cattle Commissioner. Notwithstanding the Commission has not yet got in regular working order, enough has been gained to warrant us in saying we are destined to find more of the malady than we were led to believe existed, and since inoculation has been practiced in this part so extensively, we may safely say many cases that would otherwise have escaped, will now have to be fitted for and disposed of to the butcher. Mild, chronic and what are termed vaccinated cases are the rule, while the acute are the exception.

CONDITION OF THE MILK IN COWS SUFFERING WITH PLEURO-PNEUMONIA.

BY J. BLAKE WHITE, M.D., ASSISTANT SANITARY INSPECTOR.

Sanitary Bureau, Health Department, }
New York, Feb. 24, 1879. }

Walter D. F. Day, M.D., Sanitary Superintendent :

SIR: At the time of my official inspection of the cows confined in the stables connected with the distillery of Messrs. Gaff,

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Fleishmann & Co., at Blissville, L. I., a sample of milk was obtained from each of two cows numbered among the "milkers," and submitted by me to microscopical and analytical examination.

The cows appeared fagged and emaciated, were affected with an incessant dry cough, respiration labored and abdominal, and upon pressure there was marked and extensive dullness over the right thorax. The dejections were loose, and showed evidences of gastric intestinal irritation. Dr. Liautard, the expert veterinary surgeon, who accompanied me, pronounced the cows afflicted with pleuro-pneumonia.

As I have already stated, the microscopical examination revealed the oil globules agglutinated into irregular granular masses, some pieces of epithelium and cells resembling those found in colostemum. The reaction of each sample of milk was decidedly acid. In appearance they were bluish and limpid; in taste insipid and slightly bitter.

I have the honor to submit the results of my analysis, performed in duplicate, of which the following is the average:

I. Temperature, 57° (Far.). Sp. Gr., 1032 Creammeter. 4 per cent. of cream by volume.

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|-------------|---------|
| Milk..... | 89.800 |
| Fat..... | 1.185 |
| Sugar..... | 4.180 |
| Casine..... | 4.165 |
| Salts..... | 670 |
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II. Temperature, 62° (Far.) Sp. Gr., 1034 Creammeter. 5½ per cent. by volume.

| | |
|-------------|---------|
| Water..... | 89.180 |
| Fat..... | 1.300 |
| Sugar..... | 4.520 |
| Casine..... | 4.345 |
| Salts | .655 |
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From the above results I have no hesitancy in pronouncing these samples of milk not only unwholesome, but in consequence of the very low percentage of fat, innutritious, and showing in every way what a depreciating effect unwholesome and insufficient food has upon this important secretion.

I think the above samples are a fair average of the milk yielded by cows penned and imperfectly nourished as those at the Blissville dairy.

I have already adduced facts to show that at this place every condition which is necessary for the maintenance of the health and lives of these unfortunate creatures are disregarded to a degree that might with just propriety excite our condemnation.

Not only should pity for these abused and wretched animals, so necessary and so useful to man, but also that highest humanity, the care for human life, demand that such disgusting establishments as these be forever abolished.

Respectfully submitted,

J. BLAKE WHITE, M.D.,

Assistant Sanitary Inspector.

PROFESSIONAL CORRECTION.

New York, 130 East 50th Street, }
February 21, 1879. }

W. D. Fay Day, M.D., Sanitary Superintendent:

MY DEAR DOCTOR: A so-called "report," published in the shape of an advertisement, and in the evident interest of Messrs. Gaff, Fleischmann & Co.,* makes use of my name in support of the conclusions said to have been arrived at by those signing the same. I need hardly say that no respectable physician should consent to have his name published in an advertisement, but in justice to myself, and in order to avoid any misinterpretation by the experts of your Board, I must inform you that I gave no authority for the publication of my opinion in any shape whatsoever. Further than that, I made a merely microscopical exam-

* See March number of the *Review*, a card in reference to cattle diseases at Blissville.

ination of two specimens of milk. I had nothing to do with that matter, and of that examination I made no formal report.

As I am not an analytical chemist, I do not presume to judge of any other than the microscopical character of fluids.

After my first visit to Blissville, I declined, under the plea of business engagements, to go again, for I became convinced that a thorough examination would neither be permitted nor was it desired. I was induced to go, not as a milk examiner, in which capacity the parties signing the report referred to, are endeavoring to represent me, but in my legitimate capacity as a pathologist. I was assured that the firm wanted a thorough and exhaustive examination, and that I should have the privilege of making an autopsy on two cows which should be selected as specimens and slaughtered for that purpose. Accordingly I went with and at the solicitation of Dr. Findlay. A cow was found in very bad condition, and with a temperature of $107\frac{1}{2}^{\circ}$ Fahr. I selected it for purposes of a *post mortem*, but the person in charge would not permit it to be killed. It was expressly understood by all the veterinarians present that no report should be published until all had had the opportunity for a thorough examination, including autopsies, and the publication in the *Herald* aforesaid was therefore a gross breach of professional etiquette.

I have written to the *Herald* city editor to have a correction inserted in his columns, but he does not seem, so far at least, to have complied with my request.

While I reserve my opinion as to the real or pretended existence of an epidemic in the Blissville stables entirely, I would state that those who visited those stables with me found more diseased cattle and far more intensely diseased individual cases than Doctor Liantard, who had examined the same cattle on three days previous.

Hoping that these lines will serve to correct and prevent any mistaken impressions from arising,

I remain, yours truly,

E. C. SPITZKA, M.D.,

Prof. Comp. Anatomy, C.V.C.

PROFESSIONAL TOPICS.

COMMENCEMENT EXERCISES AMERICAN VETERINARY COLLEGE.

On Wednesday evening, March 5, the fourth commencement exercises of the American Veterinary College were held in Lyric Hall, Fourth Avenue and Forty-second Street, New York City. A large and appreciative audience crowded the hall to overflowing. The exercises were presided over by the President of the Board of Trustees, Samuel Marsh, Esq. Upon the platform were the faculty of the college and the Board of Trustees, Prof. James Law, of Cornell University, other eminent members of the medical profession, and the Rev. Dr. Dubois, who opened the exercises with prayer. Prof. F. D. Weisse, M.D., Secretary of the Board of Trustees, read the annual report of the college setting forth the work which had been done during the year just past, and in which time lectures, didactic and clinical, had been delivered by the professors to a class of forty-two matriculants. He contrasted the success attending the efforts put forth in 1878 with that of previous years, and assured his hearers that the Board of Trustees were highly gratified with the growing prosperity of the college.

President Marsh then conferred upon the graduates, R. A. McLean, Brooklyn, N. Y.; T. B. S. Rogers, Newark, N. J.; C. C. Cattanch, N. Y. City; W. B. E. Miller, Hightstown, N. J.; A. D. Carman, Brooklyn, N. Y.; J. J. Smith, Chambersburgh, Pa.; Wm. H. Kleindopf, Middletown, Pa.; and T. J. Herr, N. Y. City, the degree of Doctor of Veterinary Surgery. Also the *adeundem* degree of D.V.S. upon T. S. Outerbridge, V.S., of Bermuda. Prof. A. W. Stein, M.D., then awarded the Alumni Association prize for the best general examination, consisting of Fleming's Sanitary Science and Police, elegantly bound; the gold medal offered by the New York State Veterinary Society for the best practical examination, and honorable mention from the professor of surgical pathology for the best written examination in surgical pathology, to R. A. McLean. The prize given by the profes-

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son of anatomy for the best anatomical preparation was awarded to T. B. Rogers; the silver medal was awarded to D. Light of the junior class, for best examination in anatomy, and honorable mention to T. C. Cowhey, for second best examination in same branch.

Prof. D. B. St. John Roosa, M.D., who was to have given an address, was prevented by sickness from being present. The address to the graduating class was delivered by Professor Law, of Cornell University, who pictured to the new members of the profession the arduous and responsible duties which graduation had imposed upon them; advised them of the honorable course which they were to pursue in their relations to each other, and of the grand results which lay within the reach of strict scientific application.

The stillness accompanying the benediction was followed by the lively strains of music from the band, and amid congratulations from the many friends of the college present, the exercises came to a happy close.

MEETING OF THE UNITED STATES VETERINARY MEDICAL ASSOCIATION.

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The semi-annual meeting of the United States Veterinary Medical Association was held at Young's Hotel, Boston, March 18, 1879.

The President and Vice-President both being absent, the Secretary called the comitia minora to order at 10:30 A.M., and nominated Dr. Stickney, of Boston, for chairman. Mr. J. N. Cutting's nomination for membership was laid over for future consideration because of his absence. The application of O. C. Farley, V.S., was, on motion, laid upon the table until next annual meeting. The Secretary called the attention of the meeting to the extended duties devolving upon the office of Secretary, and suggested that it would be to the interest of the Association to remunerate that officer for the work he is compelled to do. He claimed that at present the Secretary was virtually compelled to attend all

meetings of the Association wherever and whenever held, and to defray his own expenses; and that this, coupled with his many unpleasant duties, served to prevent suitable members from accepting the office, which should be held by one incumbent for as long a time as he continued to give satisfaction.

Dr. Robertson moved that the comitia minora recommend to the Association that a suitable remuneration be annually paid the Secretary after the expiration of the present term of office. This motion was adopted, and the committee adjourned. At 11 A.M. the Secretary called the regular meeting of the Association to order, and stated that in the absence of the President and Vice-President he was ready to receive nominations for a chairman. Dr. Stickney nominated Professor Liautard, of New York City, who was unanimously elected *viva voce*.

The following members answered roll call: Drs. Burden, Bryden, Cosgrove, Colburn, Field, Flagg, Holcombe, Liautard, Robertson, Stickney, W. Saunders, J. S. Saunders, Thayer, Very, Winchester and Wood.

The Secretary read the minutes of the last annual meeting, held in New York City, September 17, 1878, which were adopted without revision, on motion of J. B. Cosgrove. A. A. Holcombe nominated as candidates for membership in the Association the following named graduates: L. McLean, ~~M.R.C.V.S.~~, Brooklyn, N.Y.; R. A. McLean, A.M., D.V.S., Brooklyn, N.Y.; Thos. A. B. Rogers, D.V.S., Newark, N. J.; A. D. Carman, D.V.S., Long Island, N. Y.; Wm. B. E. Miller, D.V.S., Hightstown, N. J.; C. C. Cattanaach, D.V.S., New York City; J. J. Smith, D.V.S., Penna.; Wm. Kleindopf, D.V.S., Penna.; T. J. Herr, D.V.S., New York City.

In accordance with the recommendation of the comitia minora Dr. Robertson moved that after the next annual meeting the Secretary be paid an annual fee of twenty dollars; seconded by C. Burden, and carried. On motion of T. S. Very his motion, offered at the last semi-annual meeting and adopted, referring to the application for membership of L. McLean, M.R.C.V.S., Brooklyn, N. Y., was rescinded. On motion of Professor Liautard the committee on honorary diplomas were instructed to secure their early completion.

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A resolution was then adopted, reading as follows: "Hereafter whenever a member's name is dropped from the roll for a breach of professional ethics, he be requested to return his certificate of membership, and receive therefor his initiation fee of five dollars."

A lengthy and most interesting discussion then followed on the subject of contagious pleuro-pneumonia, the questions: "Are so-called recovered cases of pleuro-pneumonia capable of transmitting the disease?" and "Is a cow inoculated with the virus of pleuro-pneumonia capable of transmitting the disease?" proving of especial interest and developing a diversity of opinion. After adjournment the members sat down to one of those sumptuous dinners for which our Boston friends are famous.

A. A. HOLCOMBE, D.V.S., Secretary.

ALUMNI MEETING.

The second regular annual meeting of the American Veterinary College Alumni Association was held in the lecture-room of the American Veterinary College on Wednesday, March 5th, 1879.

The meeting was called to order by the president at 1 P.M.

The following gentlemen were present: L. T. Bell, P. Nostrand, A. H. Rose, W. J. Coates, C. H. Hall, A. A. Holcombe, C. B. Michener, S. S. Field, W. N. Wray, J. F. Winchester, J. C. Corlies, N. G. Schmidt and G. P. Penniman.

The minutes of the previous meeting were read and adopted.

The Executive Committee reported that they had expended \$15.00 for the Alumni Association prize, which consisted of "Fleming's Veterinary Sanitary Science and Police," two volumes, and which had been awarded to R. A. McLean, D.V.S., of Brooklyn. The Executive Committee were directed to draw upon the Treasurer for the necessary amount.

The Librarian reported that there were but two volumes in the library, "Gamgee's Practice," which were donated by L. T. Bell, D.V.S. Dr. A. A. Holcombe stated that he would present

"Dalton's Physiology," "Coe's Concentrated Medicines," "Flint's Examination of Urine," and "Microscopy."

The Treasurer reported that as but very few of the members had paid their dues, there was but \$12.00 in the treasury.

The following gentlemen, who had just received the degree of D.V.S., were admitted as members of the Association: R. A. McLean, Thos. B. Rodgers, W. E. B. Miller, A. D. Carman, C. C. Cattanach, J. G. Smith, Wm. H. Kleindopf, Thos. J. Herr and Theodore Outerbridge.

The President appointed Dr. Coates, in the Secretary's stead, to notify the gentlemen of their admission.

On motion, the President was directed to appoint seven, instead of five members, to compose the Executive Committee.

A communication from Dr. Blakeley was then read by the Secretary, in which were expressed the writer's regrets at not being able to attend.

The President presented to the meeting the answer of the Board of Trustees in relation to the preamble and resolution which the Association forwarded to that body a year ago.

Dr. Coates introduced the subject of procuring a life size portrait of Dr. A. Liantard, to be placed in the American Veterinary College lecture room.

R. A. McLean moved that the President appoint a committee of three to make all necessary inquiries regarding the cost of the proposed portrait of Dr. Liantard, that said committee then inform each member of the Association of the amount, and request from each their share toward defraying the expense. Drs. McLean, Bell and Coates were appointed as such committee.

A paper was then read by Dr. Michener, after which the President appointed Drs. Bell, Winchester, Rogers, Nostrand and Corlies a committee to nominate officers for the ensuing year. A recess was then indulged in.

The committee on nominations reported as follows: President, A. A. Holcombe and Charles Burden; Vice-President, J. C. Corlies and W. N. Wray; Secretary, C. B. Michener and G. P. Penniman; Treasurer, R. A. McLean and Jas. D. Hopkins; Librarian, S. S. Field.

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Drs. Schmidt and Smith were appointed as tellers, and the following gentlemen proved to have been elected: President, A. A. Holcombe; Vice-President, J. C. Corlies; Secretary, C. B. Michener; Treasurer, R. A. McLean; Librarian, S. S. Field.

The Secretary's bill for minute book, etc., was ordered paid.

Drs. McLean, Penniman and Corlies were selected to furnish essays for the next annual meeting, to be held about March 1st, 1880.

On motion, the Association adjourned.

C. B. MICHENER, Secretary.

A. A. HOLCOMBE, President.

STATISTICS.

SECOND ANNUAL REPORT OF THE KONIG. TECHNISCHE DEPUTATION FÜR DAS VETERINÄRIEN, WITH REFERENCE TO THE DISTRIBUTION OF INFECTIOUS ANIMAL DISEASES IN PRUSSIA FROM APRIL 1, 1877, TO MARCH 31, 1878.

Issued February 1, 1879, as Supplement to Vol. 5, "Archiv für Wissenschaftliche Thierheilkunde, Hirschwald, Berlin."

Anthrax.—From this disease have died 70 horses, 1,203 cattle, 1,313 sheep, 204 hogs. As in the last report, so in this, little dependence can be placed upon the reported number of sheep, on account of the difficulty of gaining trustworthy statistics with reference to these animals; the number dying from this disease is suspected to be much larger. With reference to swine, it may be interesting to Americans to know that the so-called "hog cholera," is included here in some degree—no special statistics are as yet taken for the same in Germany—and that the greater number of the 204 swine thus reported as dying of anthrax died of this swine pest, thus showing very strikingly the difference between its ravages in Germany and the United States. The numbers with reference to horses and cattle may, however, be trusted, and give an idea of the extension attained by anthrax during the year in question.

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| As to dispersion, the disease comes to pass in— | | | | | | |
| 1st quarter in 262 different localities, in which died 329 cattle. | | | | | | |
| 2d | " | " | 410 | " | " | 439 |
| 3d | " | " | 213 | " | " | 235 |
| 4th | " | " | 171 | " | " | 200 |

Total.....1,208

Thus showing the sporadic character of the disease. Nothing new with reference to its ætiology has been developed; in many places the disease is stationary. Eighteen cases of infection of human beings are reported, of whom nine died.

The *foot and mouth disease* is reported as having been constituted by 18,589 cattle, 2,495 sheep, 2,047 swine. Nothing of any great importance need be added to the abstract of the first year's report, printed in December REVIEW, with reference to ætiology and manner of extension. The disease is reported as having come to pass in three localities among *men*, from using uncooked milk from deceased cattle.

From *contagious pleuro-pneumonia* are reported as having been diseased 1,932 cattle, of which 71 died; 1,662 were killed by the veterinary authorities, and 247 by owners; a comparison of these figures with those of last report shows the number reported as deceased to be 1,189, as peremptorily killed 740, and as killed by owners 215 less. *This favorable decrease in the extension of this disease finds its explanation in the more exact execution of the law requiring the immediate slaughter of all deceased animals. This disease prevailed to a marked degree in Magdelburg and Merseberg, regions where inoculation is much more extensively practiced than in other parts of Prussia. As remuneration for peremptorily slaughtered cattle the State paid out the sum of 287,937 marks (four marks to the dollar), against 344,808 of the last year. This sum is not paid direct from the State funds, but in each district there is an assessment on each head of cattle from which these losses are paid. The chief moment to the extension of the disease is to be sought in the introduction and sale of apparently convalescent animals into different localities.*

From *glanders (malleus)* 2,953 are reported as diseased;

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138 died; 2,499 peremptory killed; 211 killed by owners; a decrease on the last year which we see. *The careful endeavor to gain statistical knowledge with reference to this disease has proven that the disease is much more frequent than has been heretofore assumed, and that it frequently comes to pass in its pulmonary form where all external (visible) phenomena are wanting.* 470,214 marks were paid out as remuneration for peremptorily killed animals, against 406,480 marks last year (1876-77).

In one family six men became infected with glanders, of whom three died. One veterinarian died from glanders, and in the last quarter another man.

Variolæ ovinae, as in the last report, come most frequently and fatally to pass in those districts where preventive inoculation is still resorted to, the same giving invariably the most frequent cause to the eruption of the disease. The same is now forbidden and punishable, which may account for the favorable diminishing in number of cases reported as by natural infection. 706 sheep are reported as diseased per natural infection; 832 as protective inoculated; 3,888 as having died, against 873, 322 and 6,831 of previous years.

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The exanthema of genital organs of cattle and horses is reported as coming to pass in about the same proportion and manner as in last report.

Scabies is reported as having come to pass by 967 horses, 135,896 sheep. Of the former 85 died, or were killed, and of the latter 1,309.

Rabies came to pass by 571 dogs, 6 horses, 132 cattle, 33 sheep, 16 hogs. 137 roaming dogs were killed, and 1,098 rabid, suspected to have been in connection with suspected or rabid dogs; 6 men are reported as having died.

The *Rinderpest* appeared in four small places in the vicinity of the Russian-Poland boundaries, the same possessed 715 head of cattle, distributed over 459 localities; the disease appeared in 91 of the latter. Nine cattle died of the disease, 81 were slaughtered, and 17 sheep and goats, of which 2 sheep and 7 goats were diseased.

The above represents but a very small part of the material contained in this most excellent report. The same covers 84 printed pages, and constitutes a small text book on infectious diseases, and in a much better and more instructive form than larger books of this kind often present such knowledge. The reviewer greatly regrets press of work prevents him considering more fully the mass of valuable material herein presented, and most cordially recommends every German-reading American veterinarian to study these reports, which can be easily done, as hereafter they are to be given out as a supplement to the Berlin Veterinary "Archivs," the cost of the latter being only \$3.25 per year post paid to the United States.

Berlin, February 1, 1879.

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EXCHANGES. ETC.. RECEIVED.

HOME EXCHANGES.—American Agriculturist, Scientific Farmer, Scientific American, Hospital Gazette, Medical Record, Country Gentleman, Turf, Field and Farm, New York Rural, American Bookseller, Prairie Farmer, Practical Farmer, Ohio Farmer, Maine Farmer, National Live Stock Journal, Western Farm and Live Stock Journal, Index Medicus, Medical and Surgical Reporter, The Farm Journal, The American Farmer, The Proceedings of the Medical Society of the County of Kings.

FOREIGN EXCHANGES.—Journal de l'Agriculture, Veterinarian, Veterinary Journal, Recueil de Medicine Veterinaire, Archives Veterinaires, Mouvement Medical, Clinica Veterinaria, Bulletin de la Societe Centrale de Medicine Veterinaire, Gazette Medicale, Revue fur Theirheilkunde und Thierzucht, Bericht uber das Veterinarwesen.

NEWSPAPERS.—Western Sportsman, Western Agriculturist, Our Dumb Animals, Vermont Record, The Ploughman, New England Farmer, The Leader (Can.), The Farmers' Review, The Nation, The Farmers' Head Light, The Gazette (Can.), Medical Times and Gazette, The Philadelphia Inquirer, Our Home, Evening Express (Providence, R. I.), Montreal Herald (Can.), The Inter Ocean (Chicago), The Item (Philadelphia).

CATALOGUES, ETC.—Seventh Annual Report of Roosevelt Hospital, The Relations of the Medical Profession to the State (by Dr. D. B. St. John Roosa), Announcement of the Spring Session of the College of Physicians and Surgeons.

COMMUNICATIONS.—Professor D. McEachran, F. S. Billings, E. F. Thayer, C. Michener, A. A. Holcombe, W. C. Corlies, N. H. Paaren.

BOOKS RECEIVED.—Diseases of Live Stock, by L. V. Teller, M.D.